



Keeping cool: Embedding resilience in the initial teacher education curriculum

Final Report 2012

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Abbreviations

Term	Definition
ALTC	Australian Learning and Teaching Council Ltd.
AARE	Australian Association for Research in Education
DEST	Department of Education, Science and Training - now renamed Department of Education, Employment and Workplace Relations (DEEWR)
EDNA	Education Network Australia
ERIC	Education Resources Information Center
ITE	Initial Teacher Education
UNESCO	United Nations Educational, Scientific and Cultural Organization
UPE	Universal Primary Education
WACOT	Western Australian College of Teaching

Contents

Executive summary	1
Part 1: Project overview	3
Rationale and context	3
Project aims	3
Project outcomes and deliverables	4
Part 2: Approach and methodology	10
Participants	10
Data analysis	10
Project timeline	11
Part 3: Contribution to the sector and educational research	12
Literature review	12
Profession-related dimension	14
Emotional dimension	14
Motivational dimension	15
Social dimension	15
Multiple dimensions of resilience	15
Contexts to support teacher resilience	16
Building teacher resilience: The role of pre-service programs	18
Questions for teacher educators to ask	19
Part 4: Strengths and challenges	20
Factors contributing to success	20
Challenges encountered	20
Dissemination	21
References	24
Appendices	27
Appendix 1: Teaching surveys	27
Appendix 2: White paper for dissemination	41

Executive summary

The project titled “*Keeping Cool: Embedding Resiliency in the Initial Teacher Education Curriculum*” (referred to hereafter as the *Keeping Cool* project) aimed to develop enhanced, evidence based understandings about the characteristics of resilient pre-service and early-career teachers. These understandings would be used inform the development of a resiliency framework that would provide support for the development of resilience through pre-service teacher education curriculum change.

The specific outcomes of the project are:

- Enhanced understandings about the characteristics of resilient student teachers.
- Evidence-based understanding of factors contributing to teacher resilience at the undergraduate level.
- Development of a Resilience Framework for teacher education curriculum.
- Support given to current pre-service teachers for building resilience.
- Teacher education curriculum change to enhance resilience of future pre-service teachers.

There are four key deliverables of this project:

- An annotated bibliography of empirical studies on teacher resilience.
- A survey designed to measure constructs associated with teacher resilience.
- The *Keeping Cool* website.
- A *Resilience Framework* to inform teacher education curriculum.

These deliverables can be found at the Keeping Cool website <www.keepingcool.edu.au> and their development is discussed below.

Early in 2010 an annotated bibliography was developed which provided a comprehensive background to the already published international empirical literature on the subject of teacher resilience. The annotated bibliography was used to produce a review of the international literature, which was subsequently published in the high impact journal *Education Research Review* (Beltman, Mansfield & Price, 2011).

Extensive quantitative and qualitative data were gathered through the distribution of a paper-and-pen and online survey to pre-service and early career teachers in 2010 and 2011. Two versions of the survey were specifically designed by members of the project team. The first, tailored for graduate teachers assessed the following core constructs: (1) general teacher self-efficacy; (2) retrospective and prospective motivation for teaching; (3) satisfaction with teacher preparation; (4) self-perceived competency for core teaching skills; and (5) professional plans for the future.

The second version, tailored for early-career teachers, measured respondents’: (1) general self-efficacy; (2) motivation for teaching; (3) coping skills; (4) optimism and stress in the workplace; (5) general resilience; and (6) plans for the future.

In addition, both versions of the survey gathered data that described the demographic characteristics of respondents. In all, 317 graduating teachers and 161 early-career teachers responded to the two versions of the survey.

Rich qualitative data were gained from two sources. Firstly an open-ended question was included in the surveys. This question asked pre-service and early-career teachers to describe what they understood a resilient teacher to be. Members of the project team then analysed the data to identify a set of characteristics which captured the key features of resilience. Secondly, 16 volunteers were interviewed. The data from these interviews added further in depth and contextualised understandings about teacher resilience as understood by early-career teachers (Mansfield, Beltman, Price & McConney, 2011).

Early in 2010 a prototype website was designed to host relevant resources for pre-service and early-career teachers. Following feedback from a series of focus groups, the website was modified and launched to an audience of invited key stakeholders at the end of 2010. The intended interactive aspects of the website were achieved through the development of a Facebook page. The website will continue to be hosted by one of the project team universities following completion of the project.

The final stage of the *Keeping Cool* project has been to develop a Framework for Resilience which could be used to inform curriculum change in pre-service teacher education programs. Data gathered from the extensive review of the literature as well as the surveys and interviews, were used to inform the development of this framework. Importantly a key finding from the data was that teacher resilience is multidimensional, and is the result of a dynamic process involving both individual and contextual risk and protective factors. These factors are not isolated but can fit within four broad dimensions related to teachers' work. These dimensions can be conceived of as professional, emotional, motivational and social. Acknowledgement that teachers' work involves all these dimensions and is much more than a technical skill is of significance for pre-service teacher education curriculum design.

In order to effectively disseminate the findings of the *Keeping Cool* project, the team has used a variety of engagement and information dissemination strategies. Throughout the two-year life of the project, feedback has been sought from pre-service and early-career teachers as well as pre-service teacher educators and other stakeholders. Information about the project has been disseminated via high impact peer reviewed journals and conference presentations.

The final deliverable is in the form of a White Paper, which draws together the key findings and makes recommendations for pre-service teacher educators (including deans, academic chairs and unit coordinators) for embedding principles of resilience in their programs. The Framework is not meant to be prescriptive but rather enables stakeholders to embed principles of resilience through curriculum change in line with their particular program goals and aspirations.

Based on the understandings gained through the *Keeping Cool* project, we recommend that teacher resilience should be viewed as the capacity to do more than 'bounce back'; rather as the ongoing development of skills and knowledge that will enable teachers to sustain their commitment, motivation and engagement with the profession, 'thriving' not just 'surviving'. Teacher education programs should provide opportunities for pre-service teachers to build resilience through the development of skills that cross the four dimensions outlined in our Resilience Framework – professional, emotional, social and motivational. These include such skills as self-efficacy, problem solving, emotional management, help seeking and life/work balance. The teacher education context should also support resilience through mentoring and encouraging collegial support and networks for the future. Opportunities should be provided for students to experience and critically reflect on the wide range of teaching contexts and the diverse nature of teachers' work.

Part 1: Project overview

Rationale and context

Early-career teacher attrition is an issue of concern both in Australia and internationally. As a result, governments, employers, policy makers, higher education providers and researchers have sought explanations about why some teachers leave the profession and others stay. Successive international and Australian national reports highlighted the fact that anywhere between 25 and 40 per cent of teachers leave the profession within the first five years of teaching (DEST 2003, Australian House of Representatives, 2007). An acute shortage of primary teachers, for example, represents one of the biggest hurdles to achieving the goal of universal primary education (UPE). As such, policies that effectively address teacher training and retention should be at the core of national education policies (UNESCO, 2011).

Teacher attrition is clearly a major concern for governments, the community and the profession. A great deal of research has been conducted in an attempt to understand this trend from an attrition perspective. Why do teachers leave? And alternatively, why do some teachers stay? One explanation has been that *resilience* may contribute to teachers' ability to adapt and thrive under challenging working conditions. Other professions such as social work, nursing, mental health, and medicine have looked to *building resilience* to help better prepare individuals for dealing with the challenges of their work in these fields. The teaching profession may also benefit from a focus on *building resilience* at the pre-service and early-career stages.

To investigate *building teacher resilience*, a team of researchers from Murdoch University (WA), Curtin University (WA) and RWTH Aachen University (Germany) developed the “**Keeping Cool: Building Teacher Resilience**” project. The project was funded by an Australian Learning and Teaching Council grant from 2009–2011. Central to the project was a literature review and an extensive annotated bibliography on teacher resilience, data collection around teachers' views on resilience (surveys and interviews) to explore factors influencing teacher resilience, and development of a website <www.keepingcool.com.au> to support resilience in pre-service and practicing teachers. Complementing the website, a Facebook page was developed enabling a wider audience to view and interact with online resources. As teacher educators, these aspects of the project also enabled us to investigate how principles of resilience may be embedded in initial teacher education programs, both in Australia and more widely.

Project aims

The aims of this project were to:

- Investigate the relationship between teacher resilience and retention through a review of the literature and qualitative and quantitative data collection.
- Develop key principles and strategies for resilience to create a *Resilience Framework for Teacher Education Curriculum*.
- Implement the *Resilience Framework* in units in the Bachelor of Education programs at Murdoch University and Curtin University of Technology.
- Construct an interactive website *Keeping Cool* to support the development of resilience in pre-service teachers.
- Disseminate findings and the *Resilience Framework* to the Higher Education sector to promote the uptake of innovative curriculum practices.

Project outcomes and deliverables

Outcomes

The project has five key outcomes, namely:

- Enhanced understandings about the characteristics of resilient student teachers;
- Evidence-based understanding of factors contributing to teacher resilience at the undergraduate level;
- Development of key principles to inform the Resilience Framework for Teacher Education Curriculum;
- Support given to current pre-service teachers for building resilience; and
- Curriculum change to enhance resilience of future pre-service teachers.

Deliverables

This project has four main deliverables. The sections below report on how each deliverable has been achieved.

Annotated bibliography and literature review

The initial phase of the project involved the development of an annotated bibliography on teacher resilience. Phase 1 involved an extensive search of social science, psychology, health science and education databases (eg ERIC, Psycharticles, Science Direct, Proquest), specific publisher data bases (eg Sage Journals Online, Wiley Interscience) in English, and from 2000–2010, using the search terms “resilience” and “teach”, then “stress”, “burn out”, “coping”, “peer support”, “optimism” and “wellbeing”. Two-hundred and sixty studies were identified, and then the list was refined to include only empirical studies published in peer-reviewed journals. A final list of 50 papers was identified for the annotated bibliography, available through the Keeping Cool website <www.keepingcool.edu.au/node/21>, and has been used as the basis of a journal publication (Beltman, Mansfield, Price, 2011) in *Educational Research Review*.

Survey

Secondly, a survey for gathering data about factors that influence resilience in ITE students was developed and implemented.

Extensive quantitative and qualitative data were gathered through the distribution of paper-and-pen and online surveys to graduating pre-service and early-career teachers in 2010 and 2011. Two versions of the survey were designed by members of the project team. The first, tailored for graduating teachers, assessed the following core constructs: (1) general teacher self-efficacy; (2) retrospective and prospective motivation for teaching; (3) satisfaction with teacher preparation; (4) self-perceived competency for core teaching skills; and (5) professional plans for the future.

The second version, tailored for early-career teachers, measured respondents’: (1) general self-efficacy; (2) motivation for teaching; (3) coping skills; (4) optimism and stress in the workplace; (5) general resilience; and (6) plans for the future.

In addition, both versions of the survey gathered data that described the demographic characteristics of respondents. In all, 317 graduating teachers and 161 early-career teachers responded to the two versions of the survey.

Scales for respondents’ satisfaction with teacher preparation, self-perceived competency for core teaching skills, and professional plans for the future were developed by McConney,

adapted from earlier work on comparing the views of differently prepared teachers (Isaacs, Elliott, McConney, Wachholz, Greene, & Greene, 2007).

Scales related to assessing teachers' general resilience, optimism, and stressors in the workplace were developed by the project researchers based primarily on previous work by Tait (2008) and Bobek (2002).

Items related to respondents' coping skills were adapted from the Deakin Coping Scale (Moore, 2003/2004).

The teacher self-efficacy scales used in the two surveys were adapted from instruments originally developed by Gibson and Dembo (1984), and further refined by Woolfolk and Hoy (1990, 1993).

The survey's open-ended items were collaboratively developed through a series of discussions among the project team.

The demographic items on the survey were adapted from an instrument previously developed by McConney and Price (2009).

The results from the survey data will be used to inform the *Resilience Framework for ITE Curriculum*, our third deliverable.

In furthering our understanding of teacher resilience, and for informing the resilience framework for teacher education, our analysis of the survey data gathered showed empirically that self-efficacy is a critical component of teacher resilience. The survey analyses provided us more insight into factors that would seem influential for graduate teachers' self-efficacy, and therefore, by extension, their resilience. For example, we can say with some confidence that satisfaction with teacher preparation is moderately important (explaining 13 per cent of the variance in self-efficacy) generally, and very important for those graduates with average prospective motivation for teaching.

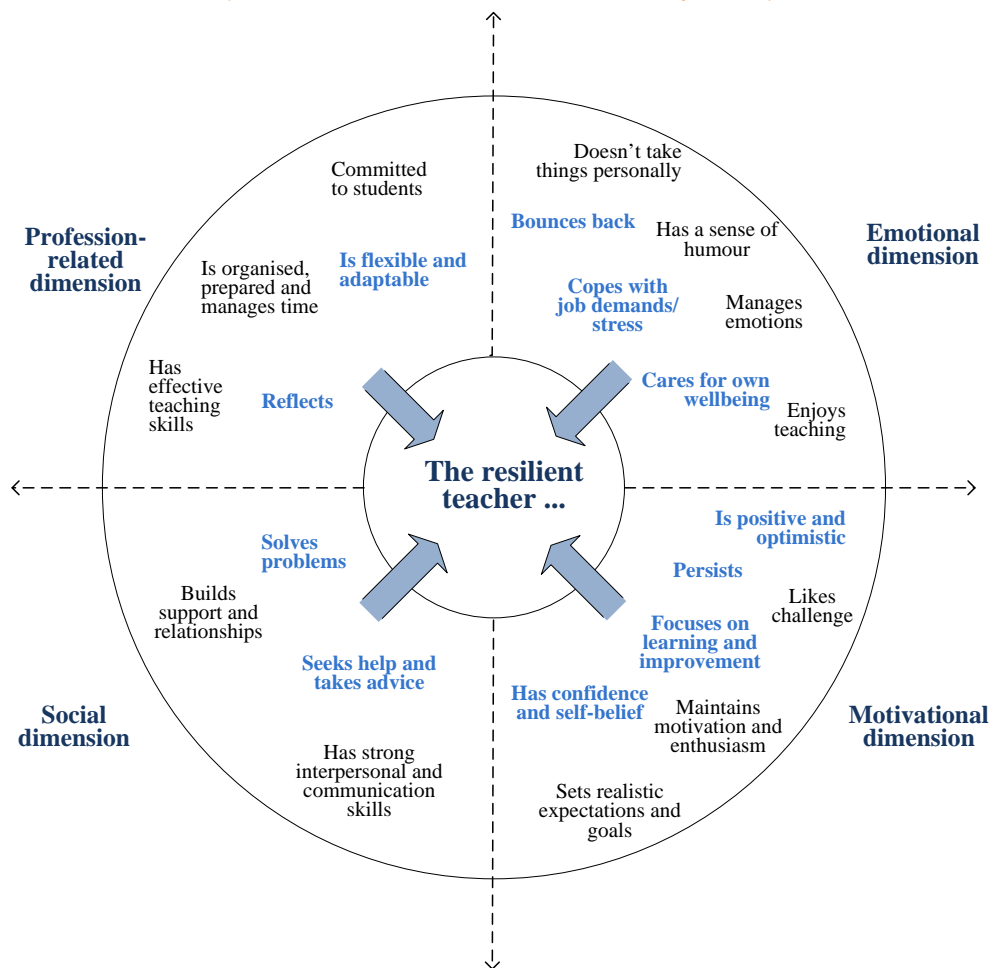
We can also say with confidence that self-perceived competence in a variety of core teaching skills is important in self-efficacy (uniquely explaining 23 per cent of the variance in self-efficacy).

Perhaps most significant in this is graduate teachers' self-perceptions about their subject matter (content knowledge) competence. Put another way, to help develop self-efficacious teacher graduates, which would also improve their likelihood of being resilient, teacher preparation must ensure that graduates are offered sufficient opportunities to develop high levels of competence in core teaching knowledge and skills, and most significantly, in their subject matter knowledge. The provision of personalised counselling for those thinking twice about their place in the profession may also be warranted.

Resilience Framework

A *Resilience Framework* for design of teacher education curriculum has been developed. Emerging from qualitative data analysis of survey questions, focus group and individual interviews, this framework illustrates four dimensions of teacher resilience that should be considered in pre-service teacher education; those being emotional, motivational, social and profession-related. Each of these dimensions has various aspects, as noted in the words of participants in Figure 1 below. The words in light blue show those most frequently reported. In our development of this framework, we acknowledge that resilience is a multidimensional construct, and resilient teachers demonstrate skills and attributes across dimensions.

Figure 1: The four dimensional framework of teacher resilience
(Mansfield, Beltman, Price & McConney, 2011)



Keeping Cool website

A final deliverable is the development of the *Keeping Cool* website which provides access to supporting resources about teacher resilience.

As expected, the website design and development went through a number of iterations since the first inception. Feedback gained from focus groups with pre-service teachers and other professionals in the education sector influenced this development. The final product is easy to navigate and user friendly.



One of the original intentions of the website was that it would enable users to network and interact through discussion boards, blogs etc. However, after a great deal of deliberation the research team decided that the interactive element of the *Keeping Cool* website would be better served through the development of a Facebook page. Facebook is a social media application with more than 800 million active users of which 50 per cent or more log-on to Facebook each day (Facebook Statistics, <www.facebook.com/press/info.php?statistics>).

A recent report indicated that 65 per cent of online adults use social networking sites, and of this particular group 67 per cent identify that their main focus is to maintain connections to friends and family (Pew Internet & American Life Project, 2011). The report on the *Keeping Cool* Facebook page can be found in the section below.

As originally proposed, the website contains the annotated bibliography of resilience literature and links to key organisations. In addition, the website has been a valuable vehicle for gathering research data through surveys, housing working documents and disseminating research findings to the wider community. Ultimately, it is the home for the *Keeping Cool* project.

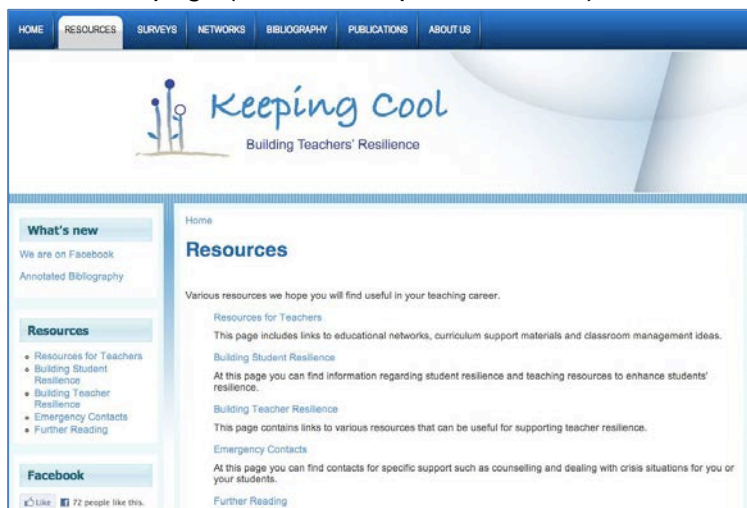
Google Analytics <www.google.com/analytics/> was used to gather the following information:

- **Our visitors.** Over the past 12 months (19 November 2010 to 19 November 2011) the *Keeping Cool* website, has received a total of 2777 visits from 1999 visitors from 53 countries/territories. As expected most of the visits have been from Australia (2232) while others are from the United States (147), United Kingdom (115), Germany (49), Canada (44), France (17), Philippines (16), New Zealand (13), and Singapore (13).
- **How did people find our website?** The majority (52.97 per cent) came directly to the website, while 39.58 per cent found the *Keeping Cool* website through a Google search.
- **Content.** A total of 6917 pages were viewed with the most widely viewed content identified in the following section.

Building Teacher Resilience page (1004 – 14.51 per cent views)



Resources page (881 – 12.74 per cent views)



Resources for Teachers page (716 – 10.35 per cent views)

The screenshot shows the 'Resources for Teachers' page. The header includes a navigation bar with links: HOME, RESOURCES, SURVEYS, NETWORKS, BIBLIOGRAPHY, PUBLICATIONS, and ABOUT US. The main header features the 'Keeping Cool' logo and the tagline 'Building Teachers' Resilience'. On the left sidebar, there is a 'What's new' section with a Facebook link and an 'Annotated Bibliography' link. Below this is a 'Resources' section with a list of links: Resources for Teachers, Building Student Resilience, Building Teacher Resilience, Emergency Contacts, and Further Reading. A 'Facebook' section shows a 'Like' button and a notification that 72 people like this. The main content area is titled 'Resources for Teachers' and includes a 'Home' link. It states: 'Below you will find some useful weblinks with regard to curriculum, negotiating with parents and colleagues, tips for teachers, and beginning teacher support.' There are two sub-sections: 'Curriculum Resources' featuring 'EDNA – Education Network Australia' with a link to www.edna.edu.au/edna/go and a description of its purpose, and 'Global Projects' with a link to www.http://www.globaleducation.edna.edu.au/global/page1.html and a description of online projects for teachers and students.

Building Student Resilience page (677 – 9.69 per cent views)

The screenshot shows the 'Building Student Resilience' page. The header is identical to the previous page. The left sidebar is also identical. The main content area is titled 'Building Student Resilience' and includes a 'Home' link. It states: 'Below you will find links to programs regarding student resilience and resources you can use in your teaching.' There are three sub-sections: 'About Resilience – Early Childhood Australia' with a link to http://www.earlychildhoodaustralia.org.au/emotional_foundations_for_learning/resilience/about_resilience.html and a description of its overview; 'Aussie Optimism' with a link to http://psych.curtin.edu.au/research/aussieoptimism/index.htm and a description of its programs; and 'The Resiliency Resource Centre' with a link to http://www.embraceofthefuture.org.au/resiliency/index.htm?http://www.embraceofthefuture.org.au/resiliency/what_is_resiliency.htm and a description of its website for teachers, parents, and others.

Home page (460 – 6.65 per cent views)

The screenshot shows the 'Home' page. The header is identical. The left sidebar is identical. The main content area is titled 'Home' and includes a 'Home' link. It features a welcome message: 'Welcome to Keeping Cool – the website providing preservice and early career teachers with strategies and resources to develop resilience in their professional lives. At this website you will find information about teacher resilience and links to contemporary resources and programmes about resilience.' Below this is a 'Participate Now...' section with two surveys: 'Survey for final year teacher education students' and 'Survey for early career teachers'. To the right of the surveys are logos for 'Murdoch UNIVERSITY', 'Curtin University', and 'RWTH AACHEN UNIVERSITY'. At the bottom, there is a statement: 'Support for this project website has been provided by the Australian Learning and Teaching Council Ltd, an initiative of the Australian Government Department of Education, Employment and Workplace Relations.' and a disclaimer: 'The views expressed in the project do not necessarily reflect the views of the'.

Facebook

As mentioned above, the *Keeping Cool* Facebook page was used to provide social networking related to teacher resilience and raise awareness of the issues facing early career teachers. There were two main online communities created as part of this project, these were:

- The *Keeping Cool* Facebook page
<www.facebook.com/#!/pages/Keeping-Cool-Building-Teachers-Resilience-AU/123065291088394>; and
- The *Keeping Cool* discussion group <teacherskeepingcool@groups.facebook.com>.

In the last 10 months since the launch of the *Keeping Cool* Facebook page (February 2011), the page has received a total of 7951 hits. It has received 72 Likes and had an average of 17 users per day since its inception. As a result of posts to the *Keeping Cool* Facebook wall, there have been 4478 Impressions on relevant links provided. As a result of this, 21 people came back to the *Keeping Cool* website to make personal comments and leave feedback.

The majority of visitors are from Australia, however, there have also been several international visitors to the *Keeping Cool* Facebook page from the United States of America, Canada, Denmark and Singapore. The majority of visitors who were directly referred to the *Keeping Cool* Facebook page from external website links came from the *Keeping Cool* website (68 per cent). However, search engines also provided a valuable route of contact with 22 per cent of external visitors entering through Google.

A breakdown of the users who Liked this web page reveals that the majority of Likes were from women (78 per cent) with male Likes making up 14 per cent and the remaining 8 per cent coming from users of unknown gender. The majority of people who Liked this page were aged 25–44 years of age (55 per cent). This is probably representative of the demographic that frequent Facebook most often, in general, but is also likely to be the demographic of many early-career teachers.

An examination of the Impressions left on the *Keeping Cool* Facebook page posts indicate that most visitors to the page were interested in links to blogs and media content. The most popular posts included a link to a blog on coping with a full-time load (256 impressions), links to EDNA beginning teacher resources (232 impressions), and a link to an interactive website with Brain Power Games (228 impressions). The least popular posts were general comments encouraging visitors to navigate to other Facebook pages or beginning discussions.

Table 1: Key metrics and demographics of the *Keeping Cool* Facebook page

Demographics (percentiles)		Key metrics	
f18–24	13.9	Daily active users (highest daily rate)	48
f 25–34	26.4	Total annual users	7951
f35–44	23.6	Total Page Likes	72
f45–54	9.7	Total News Feeds Impressions	4478
f55+	4.2		
m18–24	1.4		
m25–34	6.9		
m35–44	2.8		
m45–54	1.4		
m55+	1.4		

Part 2: Approach and methodology

A mixed method approach was taken to the data gathering in this project, utilising both quantitative and qualitative methods. Quantitative data was collected through a survey investigating psychological dimensions associated with resilience. Qualitative methods included individual interviews to provide rich, narrative information to investigate the environmental factors that may promote or hinder the development of resilience among student teachers.

Participants

The participants in this study were pre-service and early-career teachers. Participants were sourced from the graduating cohorts at both Murdoch and Curtin University, through each institution's Alumni organisations, and through the Western Australian College of Teaching (WACOT), the teacher registration body in WA. Participants completed the survey (317 graduating teachers and 161 early-career teachers) and 15 participants were interviewed.

Data analysis

Survey data

For each data set (prospective teachers and early-career teachers) we conducted both descriptive and inferential analyses of data gathered via survey. The descriptive analyses allowed us to assess the strength of measured constructs for the two groups, and apparent changes in those constructs across time. Further, a number of multivariate regression analyses allowed us to better understand the unique proportions of variance in teacher self-efficacy explained by the variables measured in the surveys. From these analyses, we can say that overall, graduate teachers' self-efficacy is most strongly explained by their self-perceived competency and by their satisfaction with their teacher preparation program. More specifically, the explanatory variables in our model above account for almost half of the variability in graduate teachers' self-efficacy. Additionally, regression analysis allowed us to empirically observe the strong association between teacher self-efficacy and general resilience.

Essentially, descriptive and inferential analyses in combination allowed us to observe relationships among the constructs reported in the literature as important 'components' or 'aspects' of resilience, to confirm these relationships and observe their change over time, and to confirm the multidimensionality of the overall construct.

Survey data (qualitative)

Qualitative data from the survey, specifically that regarding participants' goals for teaching and their response to the question "what makes a resilient teacher?" were analysed using both inductive and deductive processes. NVivo9 was used for data management and coding. The qualitative data has been reported in two papers.

Interviews

Individual interviews were transcribed and analysed using a conceptual model identifying risk and protective factors of individuals and contexts, challenges (and responses to challenges), and outcomes. Vignettes illustrating particular responses to professional challenges were developed and presented at the Australian Association of Research in Education, 2011 Conference.

Project timeline

There were four main stages in this project.

Stage 1 (planned for January to June 2010) undertaken August to March 2010

In stage 1, participants were recruited from Murdoch and Curtin teacher education enrolments, and the initial survey was designed and administered. Pilot data was analysed (from a 2008 project) and the annotated bibliography was completed. The design of the *Keeping Cool* website was undertaken, using focus groups with teacher education students, teacher educators and members of the Western Australian Institute for Educational Research, to inform the design.

Stage 2 (planned July to September 2010) undertaken January 2010 to October 2010

In stage 2 we had intended to conduct focus group interviews with early-career teachers. Despite our best efforts however it was not possible to conduct the planned focus groups because of the difficulty of having enough participants able to attend at the same time. Even though it was school holidays, participants had other commitments such as caring for children etc. A number of participants were also in rural locations making attendance not possible. Instead, 16 one-on-one interviews were conducted. Stage 2 also involved analysis of data from the first survey and design of the second survey, which was made available on the website.

The *Keeping Cool* website was launched on 7 October 2010, making it available for general use. Website monitoring also began through Google Analytics.

During this stage we also sent a report of our progress to the members of our Reference Group. We also invited feedback about the project and the website. Feedback was used to inform our next steps.

Stage 3 (planned October to December 2010) undertaken October 2010 to December 2010

During stage 3, the data from individual interviews was transcribed and participants for the second survey were recruited through both universities and WACOT.

Website monitoring was ongoing. The option of setting up a Facebook page was investigated. The project's First Year Report was finalised and submitted along with the very positive and helpful external Evaluation Report completed by Dr Karen Kimmel.

Work on the Annotated Bibliography was completed and published on the website. Data from the Annotated Bibliography began to be used to inform the Literature Review.

Stage 4 (planned January to June 2011) undertaken January 2011 to November 2011

During stage 4 the Facebook page was set up and linked to the *Keeping Cool* website.

Analysis of quantitative and qualitative survey data from 2010 was conducted and the survey for 2011 was advertised through WACOT, Murdoch Alumni e-newsletter and Pre-service Teacher Education e-newsletter.

Dissemination activities were ongoing and highly successful, with four papers accepted for high-ranking peer reviewed international journals in 2011. Members of the project team presented at five international conferences. Other dissemination activities included the continued distribution of the *Keeping Cool* postcards.

The website and Facebook page continued to be updated and monitored. A major focus for the second half of stage 4 was the development of the draft Framework in the form of a White Paper.

Part 3: Contribution to the sector and educational research

This project advances existing knowledge through extensive review of the teacher resilience literature and development of the Resilience Framework.

Literature review

Teachers' work is highly complex, skilled and challenging. And yet it is often lowly paid and undervalued. In recent times the challenges that teachers face have become more complex. Societal changes and policy initiatives have increased the intensity of the profession while at the same time reducing teacher autonomy; leading in many cases to demoralisation and high levels of attrition (eg Down, 2009, Hargreaves 2009).

A review of the empirical literature on teacher resilience revealed an array of challenges faced by contemporary teachers in relation to their work. Many of the challenges identified related to the classroom and school context. These include classroom management issues, meeting diverse needs, lack of resources and lack of support from the schools leadership. Others highlighted broader issues related to the professional context of teachers' work. These challenges included heavy workloads, lack of time, increasing non-teaching duties, additional external regulations, demoralising policy initiatives, poor hiring practices and uncertain job security (Castro, Kelly & Shih, 2010; Day, 2008; Howard, 2004; Jennings, 2009).

Such conditions have led to what can be called 'adverse' working conditions and have contributed to large numbers of early-career teachers in many countries leaving the profession. There is however also evidence in the literature of teachers, schools and communities resisting such pressures, re-imagining schools and schooling (Smyth & McInerney, 2007), actively seeking challenges (Anderson & Olsen, 2006) and finding challenges "energising and exciting" (Brunetti, 2006, p. 819). Teachers (and their school communities) in these contexts can be seen to be thriving, not just surviving and being resilient.

How is resilience defined in the literature?

Our review of the literature identified a range of definitions of resilience in the literature as shown below in Table 2.

Table 2: Defining resilience in the literature

Definition	Source
"a quality that enables teachers to maintain their commitment to teaching and their teaching practices despite challenging conditions and recurring setbacks"	Brunetti, 2006, p. 813
"capacity to overcome personal vulnerabilities and environmental stressors, to be able to 'bounce back' in the face of potential risks, and to maintain well-being"	Oswald, Johnson, & Howard, 2003, p. 50
"using energy productively to achieve school goals in the face of adverse conditions"	Patterson, Collins, & Abbott, 2004, p. 3
"capacity to continue to 'bounce back', to recover strengths or spirit quickly and efficiently in face of adversity"; "a dynamic construct subject to influence by environmental, work-specific and personal contexts"	Sammons <i>et al</i> , 2007, p. 694
"a mode of interacting with events in the environment that is activated and nurtured in times of stress"	Tait, 2008, p. 58

(Beltman, Mansfield, Price, 2011, p. 188)

Our definition of resilience in this project is as follows:

Four key ideas guide our understanding of resilience. Firstly, we define resilience as the “process of, capacity for, or outcome of successful adaptation despite challenging or threatening circumstances” (Masten, Best & Garmezy, 1990, p. 425). The nature of resilience is determined by the interaction between the internal assets of the individual and the external environment. In addition, we acknowledge and emphasise that resilience is multifaceted, relative and dynamic, and is a socially constructed phenomenon. Finally, we recognise that resilience manifests itself in different ways, for example, what is perceived as challenging for one person, may not be for another, and similarly, how individuals display resilience may differ.

(<www.keepingcool.edu.au/node/12> retrieved 13 December 2011)

Resilient teachers have been described as those who can “rebound from disappointments” and “sustain their commitment to the profession, and with this, their effectiveness” (Day & Gu, 2009, p. 449). Resilient teachers have “the ability to adjust to various situations and increase [their] competence in the face of adverse conditions” (Bobek, 2002, p. 202) and thus are able to overcome challenging situations or recurring setbacks quickly and efficiently. Resilient teachers do not simply survive, but they maintain job satisfaction and commitment to the profession – they thrive.

As resilience is a “multifaceted phenomenon that comes into existence because of a combination of individual characteristics ... and environmental factors” (Gordon & Coscarelli, 1996, p. 15) it is important to consider both the individual and environmental conditions under which resilience may be supported or challenged. In the context of initial teacher education therefore, understanding the individual characteristics that may help build resilience is important, as is developing pre-service teachers’ capacity to respond to the challenges of the profession while maintaining their own commitment.

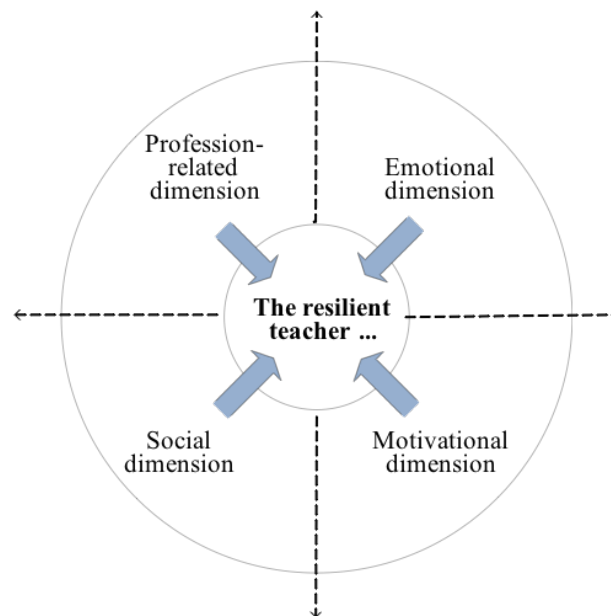
Understanding the particular individual characteristics contributing to teacher resilience has featured in much research over the last 10 years. A range of attributes of resilient teachers have been identified, such as strong intrinsic motivation (Sinclair, 2008), self-efficacy (Day, 2008), perseverance and persistence (Yost, 2006), optimism (Le Cornu, 2009), sense of humour (Bobek, 2002), emotional intelligence (Chan, 2008), willingness to take risks (Sumsion, 2003) and flexibility (Le Cornu, 2009). Similarly, skills of resilient teachers have also been noted such as problem solving (Castro, Kelly & Shih, 2009), active coping skills (Chan, 2008) and teaching skills (Bobek, 2002, Kaldi, 2009). Resilient teachers also have significant supportive relationships (Bobek, 2002; Patterson, Collins & Abbot, 2004) in their personal and professional lives. These skills and attributes can act as protective factors which moderate the effects of potential threats to teacher resilience.

The literature review also provided an overview of some of the potential threats to teacher resilience. These include personal challenges such as difficulty asking for help (Fantilli & McDougal, 2009), conflict between beliefs and practices (Flores, 2006), health concerns (Day, 2008) and reduced self-efficacy (Kitching, Morgan & O’Leary, 2009). Professional work challenges were also noted such as heavy workload (Castro, Kelly & Shih, 2009), poor hiring practices (Fantilli & McDougal, 2009), unsupportive colleagues (Sumsion, 2004), lack of resources (Flores, 2006), geographical isolation (Jenkins, Smith & Maxwell, 2009) and difficult schools (Goddard & Foster, 2001).

The *Keeping Cool* project team also investigated the question of ‘*what makes a resilient teacher?*’ from the perspective of early career and beginning teachers. Aspects of resilience were identified using survey responses to the question ‘what makes a resilient teacher?’

Rather than developing another ‘list’ of attributes and skills of resilient teachers, we sought to organise these aspects into broader, higher order dimensions. Although this presented a challenging task given the multidimensional nature of resilience, four main dimensions emerged. Aspects of resilience from our data could be related to professional, motivational, emotional and social dimensions as shown in Figure 2 below.

Figure 2: Four dimensions of the resilient teacher



Profession-related dimension

The profession-related dimension involves aspects concerning the practice of teaching, some of which may be traditionally addressed in teacher education programs. These include use of “*effective teaching strategies which actively work*” and “*the ability to use effective classroom behaviour techniques*”. Being “*a well prepared teacher*” and being able to “*multitask like a champion*” were also noted.

Many teacher education programs also focus on developing students’ reflection skills and these were seen to be important for resilience.

“[A resilient teacher] reflects on what has gone wrong, what is not working well and what is working well, and being able to make changes to the situations for the better of the students and the teacher”

Resilient teachers were perceived as those who “*maintain their commitment to their students regardless*” and “*ensure the children come first*”. Being flexible and able to “*adapt quickly when new situations arise*” was also noted as important.

Emotional dimension

Resilient teachers were described as those who “*love the job*” and are able to “*bounce back*” after facing challenges. They are “*thick skinned*”, don’t “*take things personally*” and “*stay calm in the thick of it*”.

“A resilient teacher is one who doesn’t sweat the small stuff. You have to be able to rise above the feelings of inadequacy and believe in yourself.”

They also “*cope with the demands associated with teaching*” and know how to manage stress. Managing the challenges of teaching also included maintaining a suitable work/life balance. Resilient teachers “*keep their sense of humour and enjoy the job!*” and “*can laugh about the bad/stressful events that occur and does her best to start each day with a happy attitude*”.

Motivational dimension

Resilient teachers were seen to be motivated teachers able to “*maintain a high level of motivation and enthusiasm for the job despite its difficulties*” and “*enjoy challenges within their teaching profession*”. They “*work hard to maintain a positive outlook on their work and leave school thinking about the highs rather than the lows*”. Resilient teachers “*persist and persevere through problems or situations*”, and are “*unrelenting when overcoming challenges within the classroom/school*”. They “*have realistic expectations of themselves and others*” and “*do not give up improving themselves and their practice*”.

Also related to motivation were perceptions of resilient teachers being efficacious. They are “*confident in their own abilities and knowledge*” and “*believe in themselves as a professional*”. This self-efficacy is strongly related to a positive experience of teachers’ preparation at university.

Social dimension

Our participants also described social dimensions of being a resilient teacher. For instance, help seeking and taking advice was important.

“[A resilient teacher] is someone who is willing to talk to others and ask the stupid questions” and “recognises when to ask for help and that it is okay to need help and assistance.”

Resilient teachers have “*solid and honest relationships with colleagues*” and are able to “*talk about feelings/stresses etc*”. Support networks and the role they can play in problem solving was also noted: “*needs to have a great support network (other teachers, collegiate support person etc) to discuss issues, problems, concerns, stresses*”.

Multiple dimensions of resilience

It is important to note however, that resilient teachers were not described in terms of a single dimension, moreover, resilient teachers were perceived to demonstrate a range of aspects, related to all four dimensions.

A resilient teacher is someone who:

- *Has effective time management and organisational skills.*
- *Ensures a balance between work and leisure.*
- *Has a positive attitude, even in times of difficulty.*
- *Has realistic expectations of themselves and others.*
- *Has the ability to “bounce back” when experiencing adversity.*
- *Sense of humour is essential!*
- *Willing to talk to others and ask the stupid questions!!*

This multidimensional view of resilience reflects the extant literature and highlights the idea that resilience involves a complex interplay between many capacities, skills and knowledge in the face of adverse conditions.

“I am resilient ... that’s why I’m leaving – but I’m still going to be a teacher”

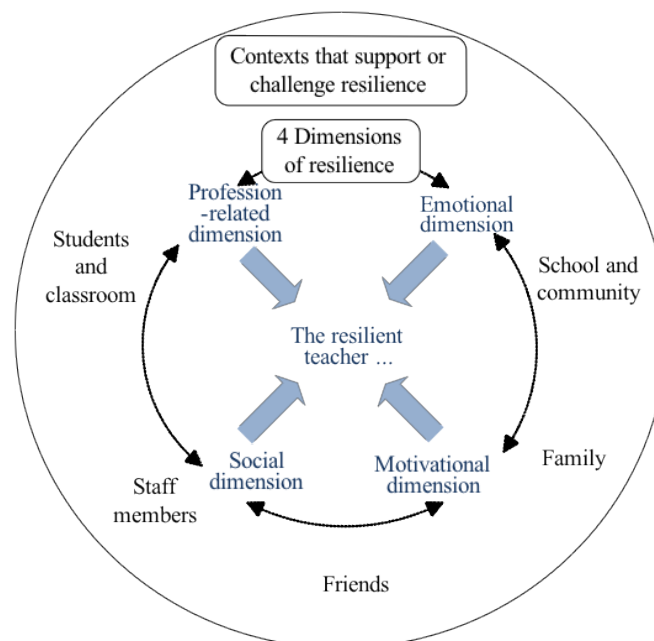
It’s important to acknowledge that our position is not that resilient teachers are those remaining in the profession with the view to ‘survive’. Moreover, our emphasis is on ‘thriving’ and the understanding that teacher resilience is evidenced by the ability to adapt despite challenging circumstances **and** sustain enthusiasm and commitment. This allows the possibility that the decision to leave a teaching situation due to ongoing challenges and pressures may not necessarily reflect lack of resilience. Moreover, a resilient teacher may recognise that the actions required to ‘adapt’ to a challenging circumstance may reduce their enthusiasm and commitment to the profession. Moving to another teaching context may provide new opportunities to realise professional goals.

Contexts to support teacher resilience

Both the literature reviewed and our data point to contexts as providing possible support and/or challenges to teacher resilience. During their professional life, teachers work with students in the immediate classroom context and also interact with colleagues, school administrative staff, parents and the broader community. Similarly, individuals live within contexts outside professional life, including others such as family and friends. These multiple contexts can offer support or challenges for the development of resilience.

These contexts, discussed in more detail below, also play a role in developing ‘the resilient teacher’ as shown in Figure 3.

Figure 3: Contexts supporting the resilient teacher



Family and friends

In a large UK study of teachers’ working lives, personal support from family was the most common factor affecting teachers with a positive sense of agency, resilience and commitment (Day, 2008). In another study, interviews with experienced, resilient teachers revealed that all had strong support groups that included a diverse network of caring friends and family – not necessarily connected with teaching (Howard & Johnson, 2004). How best to harness this support and understand the role it may play in development of teacher resilience remains a challenge.

"It's very good to have a family that understands what the job is about"

"My husband's allowed his employment to take a back seat to sort of, has taken a huge role in the house, domestically and so-on, and just laughs and says to me, 'I'll see you next year!'"

School contexts

Providing reasonable teaching assignments in their area of expertise and avoiding last-minute hiring are potential ways to improve the retention of novice teachers (Tait, 2008). Authors who have examined teacher resilience have suggested that induction, while including practical advice and socialisation into the role of a teacher, should also include opportunities for reflection on the new teachers' own practice and the values of the educational settings in which they work (Flores, 2006). Many new teachers work in relief or casual positions and may need special consideration (Jenkins, Smith & Maxwell, 2009; McCormack & Thomas, 2005).

Formal mentor programs can be especially valuable if the mentor is positive and professional (Olsen & Anderson, 2007), from the same teaching area (Smith & Ingersoll, 2004), and graduates have some say in their selection. Mentor programs must be well-designed and well-funded and benefits for new teachers include increased retention rates, enhanced self-reflection and problem-solving abilities, higher levels of self-esteem, positive attitude and confidence, and reduced feelings of isolation and of the possible stigma associated with asking for help (Fantilli & McDougall, 2009).

[mentors] *"just need to be friendly, but at the same time they need to be critical, they need to offer that advice but not you know in a nasty way, in a kind way"*

New teachers appear to be more strongly influenced by contextual factors than their more experienced colleagues, and it is important to ensure that their classroom experiences are successful, that they have sufficient resources, and are provided with supportive feedback (Tschannen-Moran & Woolfolk Hoy, 2007).

School environments that are positive, participatory and collegial are needed, not just for novice teachers, as all may benefit from this. For example, formal and informal staff interaction may occur through activities such as birthday celebrations and social outings (Jarzabkowski, 2002). Teacher resilience research indicates that work colleagues are an important source of hope and inspiration, assisting educators to cope with work difficulties and sustain their commitment, particularly in very challenging situations (Anderson & Olsen, 2006). Colleagues can boost morale (Howard & Johnson, 2004), and a positive outlook can be contagious (Jarzabkowski, 2002). It is recognised that school leaders may need professional leadership training on how to create a collaborative school culture (Fantilli & McDougall, 2009).

[other teachers] *"they're just there for you and you know that if you're having a rubbish day someone will give you a smile or you do feel very much part of a community rather than isolated, and that is a big factor, I feel"*

"I can go to any one of the staff and have a whinge or run something by them and say, 'what would you do in the situation?'"

Role of the students in the school context

School students themselves, while often providing challenges for teachers, can also provide supports for teacher resilience. For example, one US study found that resilient inner city teachers have a deep respect for the way their students have dealt with and overcome difficult circumstances, and feel a powerful responsibility and commitment to them (Brunetti 2006). Positive student-teacher relationships have been shown to sustain teachers in Ireland in the face of challenges (Kitching, Morgan & O'Leary, 2009).

"There are days when I think 'oh, I could just go and work in an office and earn more money and have less stress' [laughs] but then there's days when I think, 'gee I'm lucky.' So it's those days that you hang onto and get you through ... every job has its ups and downs but I just find it so rewarding."

Building teacher resilience: The role of pre-service programs

Both the literature and our findings indicate that 'resilience' is important to enable teachers to thrive and maintain their commitment to the profession, especially in adverse or challenging circumstances. Both individual factors and contexts provide supports and challenges to resilience. If resilience is to be a helpful characteristic of teachers, then how can resilience be developed in teacher preparation programs?

Little research was located in the literature regarding the role of pre-service programs in the development of teacher resilience. Some studies have examined strategies implemented to assist with retention and teacher development, but there seems to be a lack of intervention studies, particularly in relation to developing personal characteristics such as motivation and self-efficacy that have been found to be important in enhancing resilience. Some implications, however, may be drawn from current research.

Peers from a pre-service course can provide informal support for new teachers if networks are developed and maintained (Anderson & Olsen, 2006; Freedman & Appleman, 2008; McCormack & Thomas, 2005). Many authors writing about teacher resilience offer recommendations for pre-service programs, such as building a climate of resilience at university (Yates, Pelphrey & Smith, 2008). Specific suggestions include:

- Preparing pre-service teachers to create their own support networks in the early years of teaching (Woolfolk Hoy & Burke Spero, 2005);
- Providing opportunities for students to reflect on and discuss their beliefs and values about teaching and learning (Flores, 2006); and
- Teaching specific personal skills such as stress management, coping, social skills, assertiveness, self-regulation and empathy (Chan, 2008; Tait, 2008).

"...there's an incredible strong group of us from uni, who – I'm one of six girls who we regularly talk to each other or catch up or ... so they're mentors to me in the sense that we can talk about things, because we seem to be at a similar emotional phase of our development."

In general, more substantial links between preparation programs, employing authorities and individual schools are recommended in the literature, so new teachers are able to access support from a variety of sources according to their needs.

Questions for teacher educators to ask

While there is no 'one size fits all' approach to resilience building, the following questions may provide some useful reflection points for teacher educators and schools of education more broadly.

Do we ... embed aspects of resilience in our units? For example:

- Provide opportunities for development of skills associated with resilience – eg problem solving, organisational skills, conflict resolution, negotiation, coping skills, emotional management skills, dealing with parents, etc.
- Provide opportunities for students to reflect on their own personal development, self-efficacy, motivation and preparation for the profession.
- Empower pre-service teachers to act in ways that promote resilience (eg building your own support network) and accessing other available support through employers and professional networks.
- Provide learning environments in which a culture seeking for help is not a weakness.
- Develop tasks in which students experience competence and develop self-efficacy.
- Provide opportunities in which students have to be self-directed and solve problems.
- Explicitly examine what builds resilience in young people and teachers.
- Provide learning environments in which students have to manage social and emotional stress.
- Provide opportunities in which students can be professionally proactive and take responsibility.

Do we ... support resilience development in professional practicums and beyond? For example:

- Provide practicum opportunities for students to experience a range of teaching contexts (socio-economic, sector, rural/remote, metropolitan).
- Offer opportunities for connecting and reflecting on experiences from practicum, work and personal life to university learning and for dealing with the challenges of the profession.
- Support/continue a relationship with our graduates as they move into the profession.

Part 4: Strengths and challenges

Factors contributing to success

The success of this project was the result of a number of factors.

Project leaders and team approach

- A strong commitment from project leaders to ensuring the success of the project and monitoring achievement against intended achievement for each stage of the project.
- Team member responsibility for the success of project deliverables, based on areas of expertise.
- Collaboration to enhance the success of the deliverables.
- Collaboration in writing and development of outputs, such as publications, conference presentations and project seminars.
- Collaboration in dissemination, maximising dissemination networks across universities and teacher professional associations.
- Use of face-to-face meetings and where necessary, Skype.
- Involvement of stakeholders (pre-service teachers, university educators and members from professional associations) at key stages of the project.

Project management

- Regular (monthly) meetings with a clear agenda and detailed minutes with actions listed have been important to track discussion and ideas.
- Scheduling of full team planning days.
- Ongoing management of the budget.
- Production of tangible outputs (postcards and the White Paper).

Challenges encountered

There were a number of challenges encountered. The points below outline these and overview how the challenges were resolved.

- **Research assistants.** One of the major project challenges has been the recruitment of research assistants, especially on a part-time, casual basis. Future projects should endeavour to contract research assistants for the duration of the project.
- **Timeline.** The project proposal was for a two-year study, starting in January 2010, as three members of the project team were on study leave for the second half of 2009. The project started in 2009 as per ALTC guidelines, and this involved a shift in the timeline.
- **Participants.** Ensuring sufficient participants undertake focus groups and surveys can be challenging, as can identifying appropriate incentives. Those students who attended focus groups were given lunch. Consideration has been given to offering incentives to increase survey participation. Future projects should consider a range of strategies to maintain participation over the duration of the project.

- **Authorship.** Discussions over authorship of publications have resulted in consultation of the NHRMC Code and referred to Section 5 'Authorship' <www.nhmrc.gov.au/files_nhmrc/file/publications/synopses/r39.pdf>. Agreement was reached that authors should make a "substantial contribution" to the development of the paper to have their name in the author list.

Dissemination

The *Keeping Cool* project team has used a range of both Engaged and Information provision dissemination strategies. Information dissemination strategies have included publications in international high impact journals, conference presentations, seminars, postcards, a website and Facebook page. Specific information regarding these dissemination activities is available on the *Keeping Cool* website. The following provides a detailed list of these dissemination activities.

Academic papers (peer reviewed)

- Beltman, S., Mansfield, C., and Price, A. (2011). Thriving not just surviving: A review of research on teacher resilience. *Educational Research Review*, 6(3), 185–207.
- Mansfield, C., Beltman, S., Price, A., and McConney, A. (2012). "Don't sweat the small stuff": Understanding teacher resilience at the chalkface. *Teaching and Teacher Education*, 28(3), 357–367.
- Mansfield, C., Wosnitza, M., and Beltman, S. (under review). Goals for teaching: A framework for examining motivation of graduating teachers.
- Price, A.E., Mansfield, C.F., and McConney, A. (2012). Considering 'teacher resilience' from critical discourse and a labour process theory perspectives. *British Journal of Sociology of Education*, 33(1), 81–95.

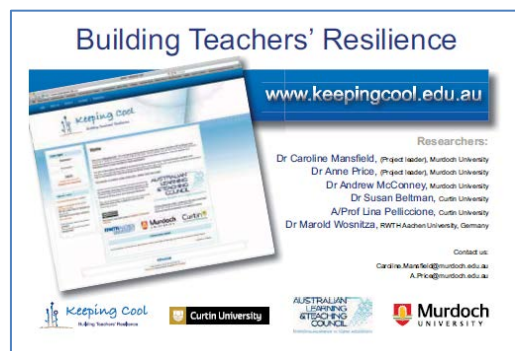
Conference presentations

- Price, A., Mansfield, C.F., McConney, A., Beltman, S., Wosnitza, M., and Pelliccione, L. (June 2010). *Toughen up princess*. Paper presented at the Comparative Education Conference, Istanbul, Turkey.
- Beltman, S., Mansfield, C., Price, A., McConney, A., and Pelliccione, L. (July 2010). *Teacher resilience: A review of current literature*. Paper presented at the 27th International Congress of Applied Psychology, Melbourne.
- Beltman, S., Mansfield, C., Price, A., McConney, A., and Pelliccione, L. (August 2010). *Teacher resilience: A systematic review of recent literature*. Paper presented at the 25th West Australian Institute of Educational Research Forum, Perth.
- Beltman, S., Mansfield, C., Wosnitza, M., McConney, A., Pelliccione, L., and Price, A. (September 2010). *Teachers' motivation and self-efficacy at the beginning of their career*. Paper presented at the 12th International Conference on Motivation, Porto, Portugal.
- Price, A., and Mansfield, C. (November 2010). *Keeping Cool: Building resilience in teacher education curriculum*. Paper presented in symposium "New ways of investigating early career teacher retention: Resilience Theory" at the Annual Conference of the Australian Association for Research in Education, Melbourne.
- Price, A. (July 2011). *Teacher Resilience*. Paper presented at the 18th International Conference on Learning, Mauritius.

- Beltman, S., Wosnitza, M., and Mansfield, C. (September 2011). *Teacher Resilience: Conceptualisations, research and practice*. Paper presented at the European Association for Research in Learning and Instruction (EARLI) 14th Biennial Conference, Exeter, 2011.
- Wosnitza, M., Mansfield, C., and Beltman, S. (September 2011). *Goals for teaching: A goal content approach to understanding teacher*. Paper presented as part of the symposium *Teacher goals: Theory development and future research* at the European Association for Research in Learning and Instruction (EARLI) 14th Biennial Conference, Exeter, 2011.
- Beltman, S. (September 2011). *Understanding Teacher Resilience*. Paper presented at the BERA British Educational Research Association 37th Annual Conference, London, 2011.
- Mansfield, C., Beltman, S., Price, A., McConney, A., Wosnitza, M., and Pelliccione, L. (2011) *“Don’t Sweat the Small Stuff”: Examining Four Dimensions of Teacher Resilience*. Paper presented at the Australian Association for Research in Education (AARE) Annual Conference, Hobart, 2011.

Other dissemination activities

- *Keeping Cool* website, located at <www.keepingcool.edu.au>, this website provides visitors a range of resilience related resources for teachers, pre-service teachers and teacher educators. The site also hosts emergency contacts, links to other relevant websites and organisations, the survey, annotated bibliography and publications developed as part of the *Keeping Cool* project. To date there have been almost 10,000 visitors to the *Keeping Cool* website.
- *Keeping Cool* Facebook page. With close to 8000 visits to the Facebook page this has been another far reaching dissemination strategy where visitors to the site have been able to access information and resources both developed by the project team and by other resilience related organisations.
- Project postcards (as opposite) were developed and distributed widely to professional organisations, schools and schools of education, at national and international conferences and seminars, and to pre-service teachers.
- *Keeping Cool* email signature hyperlinked to <www.keepingcool.edu.au>. This signature was used by all the project team as a means to further disseminate information about the project and website.
- *Keeping Cool* White Paper. This paper provides a detailed summary of the key findings of the project and comprehensive suggestions as to how Initial Teacher Education stakeholders (deans, academic chairs, unit coordinators) may embed principles of resilience into their curriculum. Printed versions of the *Keeping Cool* White Paper will be distributed nationally to all school of education deans and an online version made



available on the website. The White Paper provides comprehensive information based on findings from the project but is sufficiently broad to enable pre-service teacher education providers the opportunity to either embed principles of resilience within existing program structures or to inform curriculum change.

Engaged dissemination strategies

- School of Education Staff Seminars – during the course of the project, members of the project team have presented seminars to staff at both of the host universities and the Western Australian Institute of Education Research forum. The purpose of the seminars has been to provide an opportunity for School of Education staff to provide input into the website design and framework.
- Website forums have been held with key stakeholders and Initial Teacher Education students. Participants have been asked to view the website design and provide feedback.
- Conference symposiums have provided opportunity for members of the higher education sector to engage in discussions with the project team regarding the proposed framework and the four dimensions of resilience. At the 2011 Hobart AARE conference, a group of Early Career Teachers provided the project team with positive affirmation on the way in which we had presented resilience as a complex process involving motivation, emotion, social and professional dimensions.
- Feedback from Initial Teacher Education students has been gained through presentation of the website during lectures.

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Appendices

Appendix 1: Teaching surveys

Keeping Cool Stage 1 Survey (Final Year Teacher Education Students)

Your research ID (leave blank)	Your student ID <hr/> <i>Once your research ID has been assigned, this box will be removed.</i>
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We assure you that your individual responses to this survey are confidential and will be seen only by the *Keeping Cool* project researchers. The aggregated (combined) responses will be reported to teacher education program staff so that they can tailor our programs to best meet the needs of future students.

Part 1. Goals

- 1. Looking back over your teacher education program, what were your three major goals? Please list these in order of importance. Why were these goals important to you?**

My goals ...	Why these goals were important to me ...
1.	
2.	
3.	

- 2. To what extent do you agree with the following statements?**

	Strongly Disagree	Disagree	Agree	Strongly Agree
<i>Looking back on my experience in the teacher education program I realize...</i>				
...that I did not enjoy engaging in the topics of the program.	SD	D	A	SA
...that I engaged with the topics because it was expected of me.	SD	D	A	SA
...that I extensively engaged with the topics because that is how I approach other aspects of my life.	SD	D	A	SA
...that I engaged with the topics because the experiences and knowledge could be helpful in the future.	SD	D	A	SA

...that I enjoyed engaging with the different topics of the program.	SD	D	A	SA
...that I engaged with the topics of the course because it was exciting to learn more about them.	SD	D	A	SA

3. To what extent do you agree with the following statements?

Considering my teacher education course...	Strongly Disagree	Disagree	Agree	Strongly Agree
...it was important to me that I learn a lot of new concepts.	SD	D	A	SA
...it was important to me that other students in my class think I am good at my class work.	SD	D	A	SA
...it was important to me that I did not look stupid in class.	SD	D	A	SA
...one of my goals in class was to learn as much as I could.	SD	D	A	SA
...one of my goals was to show others that I'm good at my class work.	SD	D	A	SA
...one of my goals has been to keep others from thinking I'm not smart in class.	SD	D	A	SA
...one of my goals was to master a lot of new skills.	SD	D	A	SA
...one of my goals was to show others that class work was easy for me.	SD	D	A	SA
...it's been important to me that my teachers don't think that I know less than others in class.	SD	D	A	SA
...it was important to me that I thoroughly understand my class work.	SD	D	A	SA
...one of my goals was to look smart in comparison to other students in my class.	SD	D	A	SA
...it was important to me that I improve my skills.	SD	D	A	SA
...it was important to me that I look smart compared to others in my class.	SD	D	A	SA
...one of my goals in class has been to avoid looking like I have trouble doing the work.	SD	D	A	SA

4. Considering your *future career* as a teacher what are your major goals? Please list these in order of importance. Why are these goals important to you?

My future career goals ...	Why these goals are important to me ...
1.	
2.	
3.	

5. To what extent do you agree with the following statements?

<i>Considering my career as a teacher...</i>	Strongly Disagree	Disagree	Agree	Strongly Agree
... I really do not want to work in this profession.	SD	D	A	SA
...I will work in this profession because it is expected after having completed my university degree.	SD	D	A	SA
...I will extensively engage with this profession because this is how I approach other aspects of my life.	SD	D	A	SA
...I see my future in this profession.	SD	D	A	SA
... I am looking forward to working in this profession.	SD	D	A	SA
... I see teaching as an exciting and interesting profession.	SD	D	A	SA
...I plan to remain in teaching for more than 3 years	SD	D	A	SA
...I plan to remain in teaching for less than 3 years	SD	D	A	SA
...I plan to remain teaching in WA	SD	D	A	SA
...I plan to add a postgraduate qualification to my credentials (please specify: _____)	SD	D	A	SA

Part 2. Teachers' Work

6. For each of the following aspects of teachers' work, please indicate how well you feel you were prepared by your teacher education program.

	Poor	Fair	Good	Excellent
Developing daily lesson plans for classroom instruction	1	2	3	4
Developing long-term programs for classroom instruction	1	2	3	4
Managing student behavior in the classroom	1	2	3	4
Organizing the classroom in a manner that will foster learning for all students	1	2	3	4
Teaching to accommodate a variety of learning styles	1	2	3	4
Teaching students who require educational adjustments	1	2	3	4
Teaching students who speak English as a second language	1	2	3	4
Maintaining a safe learning environment in the classroom	1	2	3	4
Time management in terms of lesson planning, marking/grading, parent interactions, etc.	1	2	3	4
Using technology to enhance instruction and assessment	1	2	3	4
Incorporating critical thinking into instruction and assessment	1	2	3	4
Developing classroom assessment methods and using them to support student learning	1	2	3	4
Effectively communicating with students, their families, and other educators	1	2	3	4
Maintaining teacher standards for professional and ethical behavior	1	2	3	4
Problem Solving	1	2	3	4

Teaching in chosen content areas	1	2	3	4
----------------------------------	---	---	---	---

7. Self-Assessment

For each of the 12 areas of teachers' practice listed below, please rate *your current level of competence* on the practices described for a beginning teaching professional.

Please choose only one rating for each practice. Use the scale provided below.

M = Missing Capacity in Knowledge and Skill.	<i>I have little or no awareness of this set of knowledge and skills.</i>
D = Developing Capacity in Knowledge and Skill.	<i>I am aware of this set of knowledge and skills.</i>
I = Initial Proficiency in Knowledge and Skill.	<i>I possess the required knowledge and can use it appropriately most of the time.</i>
P = Proficiency in Using Knowledge and Skill.	<i>I know what to do and attempt to do it with acceptable results for many students.</i>
A = Advanced Proficiency in Practicing Knowledge and Skill	<i>I know well and consistently implement sound practice around this set of knowledge and skills.</i>
Areas of teacher practice	
1. Assessment (using assessment strategies (traditional and alternative) to assist the continuous development of learners)	M D I P A
2. Communication (using effective communication techniques with students and all other stakeholders)	M D I P A
3. Continuous improvement (engaging in continuous professional quality improvement for self and school)	M D I P A
4. Critical thinking (using appropriate techniques and strategies which promote and enhance critical, creative, and evaluative thinking capabilities of students)	M D I P A
5. Diversity (using teaching and learning strategies that reflect each student's culture, learning styles, special needs, and socioeconomic background)	M D I P A
6. Ethics (adhering to a code of ethics and principles of professional conduct of the education profession)	M D I P A
7. Human development and learning (using an understanding of learning and human development to provide a positive learning environment which supports the intellectual, personal, and social development of all students)	M D I P A
8. Knowledge of subject matter (demonstrating knowledge and understanding of subject matter)	M D I P A
9. Learning environments (creating and maintaining positive learning environments in which students are actively engaged in learning, social interaction, cooperative learning, and self-motivation)	M D I P A
10. Planning (planning, implementing, and evaluating effective instruction in a variety of learning environments)	M D I P A

11. Role of the teacher (working with various education professionals, parents, and other stakeholders in the continuous improvement of the educational experiences of students)	M	D	I	P	A
12. Technology (using appropriate technology in teaching and learning processes)	M	D	I	P	A

8. School Resiliency Climate

To what extent do you agree with the following statements?

Considering my teacher education experience at university...

	Strongly Disagree	Disagree	Agree	Strongly Agree
...students are engaged in cooperative learning that focuses on both social skills and academic outcomes.	SD	D	A	SA
...students are clear about the behaviours expected of them and experience consistency in boundary enforcement.	SD	D	A	SA
...students feel cared for and supported.	SD	D	A	SA
...students experience many types of incentives, recognitions and rewards.	SD	D	A	SA
...a climate of kindness and encouragement is fostered.	SD	D	A	SA
...students are helped to believe that they can succeed.	SD	D	A	SA
...students are involved in decision making, including governance and policy.	SD	D	A	SA
...ongoing discussion of norms, rules, goals and expectations is fostered for students and staff.	SD	D	A	SA
...teacher education students and staff are viewed as resources rather than problems, objects or clients.	SD	D	A	SA
...students are encouraged to “do what really matters” and take risks.	SD	D	A	SA
...students are encouraged to use good decision making, problem solving and healthy stress-management skills.	SD	D	A	SA
...a philosophy of lifelong learning is promoted.	SD	D	A	SA
...students are clear about what is expected of them and expectations are consistent throughout the programme.	SD	D	A	SA
...students are provided with clear outcomes and supportive feedback.	SD	D	A	SA
...an attitude of ‘can do’ is fostered.	SD	D	A	SA

9. Teacher Efficacy

To what extent are you able to...

	No extent	Little extent	Some extent	A reasonable extent	A great extent
1. control disruptive behaviour in the classroom?	1	2	3	4	5
2. motivate students who show low interest in schoolwork?	1	2	3	4	5
3. help students to believe they can do well in schoolwork?	1	2	3	4	5
4. help your students value learning?	1	2	3	4	5
5. use effective questioning strategies in the classroom?	1	2	3	4	5

6. encourage children to follow classroom rules?	1	2	3	4	5
7. calm a student who is disruptive or noisy?	1	2	3	4	5
8. establish a positive classroom environment with each group of students?	1	2	3	4	5
9. use a variety of assessment strategies?	1	2	3	4	5
10. provide an alternative explanation or example when students are confused?	1	2	3	4	5
11. assist families in helping their students do well in school?	1	2	3	4	5
12. implement a variety of teaching and learning strategies in your classroom?	1	2	3	4	5

Part 3: Summing Up

How would you describe a resilient teacher?

Looking back at your teacher preparation program, what suggestions would you offer to improve teacher preparation (ie, to better prepare new teachers for the realities of the profession)?

Would you like to add anything that hasn't been covered?

Part 4: About You

Gender: (i) male ☐ (ii) female ☐

Age: _____

What type of university degree do you or will you hold? (tick *all* that apply)

BEd ☐ BSc ☐ BA ☐ Grad Dip Ed ☐ MEd ☐ MSc ☐ MA ☐ PhD ☐

Please indicate the level of schooling that you are qualified to teach (check one):

- (a) early childhood ☐
(b) elementary (primary) ☐

(c) secondary ☐
(c) special education ☐

University (undergraduate) major: _____

University (undergraduate) minor: _____

THANK-YOU!

Keeping Cool Stage 2 Survey

Part 1. Goals

Considering your career as a teacher what are your major goals? Please list these *in order of importance*. Why are these goals important to you?

My career goals:	Why these goals are important to me
1.	
2.	
3.	

Part 2. Future Plans

To what extent do you agree with the following statements?

Considering my career as a teacher ...	Strongly Disagree	Disagree	Agree	Strongly Agree
I really do not want to work in this profession.	SD	D	A	SA
I will continue in this profession because it is expected after having completed my university degree.	SD	D	A	SA
I extensively engage with this profession because this is how I approach other aspects of my life.	SD	D	A	SA
I see my future in this profession.	SD	D	A	SA
I am enjoying working in this profession.	SD	D	A	SA
I see teaching as an exciting and interesting profession.	SD	D	A	SA
I plan to remain in teaching for more than 3 years	SD	D	A	SA
I plan to remain in teaching for less than 3 years	SD	D	A	SA
I plan to remain teaching in WA	SD	D	A	SA
I plan to add a postgraduate qualification to my credentials (specify: _____)	SD	D	A	SA

Part 3. Teacher Efficacy

To what extent are you able to...	No extent	Little extent	Some extent	A reasonable extent	A great extent
control disruptive behaviour in the classroom?	1	2	3	4	5
motivate students who show low interest in schoolwork?	1	2	3	4	5
help students to believe they can do well in schoolwork?	1	2	3	4	5
help your students value learning?	1	2	3	4	5
use effective questioning strategies in the classroom?	1	2	3	4	5
encourage children to follow classroom rules?	1	2	3	4	5
calm a student who is disruptive or noisy?	1	2	3	4	5
establish a positive classroom environment with each group of students?	1	2	3	4	5
use a variety of assessment strategies?	1	2	3	4	5
provide an alternative explanation or example when students are confused?	1	2	3	4	5
assist families in helping their students do well in school?	1	2	3	4	5
implement a variety of teaching and learning strategies in your classroom?	1	2	3	4	5

Part 4. General Resilience

To what extent do you agree with the following statements?	Strongly Disagree	Disagree	Agree	Strongly Agree
I show positive adaptation in the face of adversity	SD	D	A	SA
I am able to rebound	SD	D	A	SA
I am flexible	SD	D	A	SA
I make & maintain supportive relationships	SD	D	A	SA
I am reflective	SD	D	A	SA
I use problem-solving skills	SD	D	A	SA
I am able to plan	SD	D	A	SA
I seek help	SD	D	A	SA
I am able to act independently	SD	D	A	SA
I have goals	SD	D	A	SA

I am persistent	SD	D	A	SA
I take risks	SD	D	A	SA
I am optimistic	SD	D	A	SA

Part 5: Coping (Deakin Coping Scale)

The following questions ask about how you deal with demands or problems.

Please answer every question by circling how much you engage in each of these techniques when faced with a problem or demand.

	Never	Rarely	Sometimes	Often	Always
Work out why it is a problem for me	1	2	3	4	5
Report the matter to someone in authority	1	2	3	4	5
Discuss it with my friends and colleagues	1	2	3	4	5
Take control of the situation	1	2	3	4	5
Examine my alternatives	1	2	3	4	5
Tell others about it	1	2	3	4	5
Feel miserable about the situation	1	2	3	4	5
Identify the source of the problem	1	2	3	4	5
Analyse my reaction to the problem	1	2	3	4	5
Pray for it to go away	1	2	3	4	5
Seek advice from others	1	2	3	4	5
Take a positive approach and see it as a challenge	1	2	3	4	5
Get more information about the situation	1	2	3	4	5
Try to negotiate a solution	1	2	3	4	5
Hope for a solution to appear	1	2	3	4	5
Ask myself why it is a problem	1	2	3	4	5
Seek help from others	1	2	3	4	5
Keep my fingers crossed that it will go away	1	2	3	4	5
Try to eliminate or get rid of the problem	1	2	3	4	5

Part 6: Optimism & Stress

Please rate the following items using the scale indicated, where 1 means “not at all” and 5 means “very”.

	Not at all	Slightly	Moderately	Strongly	Extremely
How pleased are you with your choice of teaching as a career?	1	2	3	4	5
How effective have you been as a teacher this year?	1	2	3	4	5
To what degree did your pre-service program, including the practicum portion, meet your needs as a beginning teacher?	1	2	3	4	5
To what extent were the following helpful to you as a beginning teacher?					
teaching colleagues	1	2	3	4	5

colleagues from pre-service program	1	2	3	4	5
mentor	1	2	3	4	5
school administration	1	2	3	4	5
professional development provided by school or Department	1	2	3	4	5
orientation/welcoming programs	1	2	3	4	5
professional reading/independent study	1	2	3	4	5
teachers' association / union	1	2	3	4	5
friends	1	2	3	4	5
family	1	2	3	4	5
Overall, how stressful was your first year of teaching?	1	2	3	4	5

The following is a list of common stressors for teachers in their first year of teaching.

Please rate each stressor, using the scale provided, in terms of its relevance *to you during your first year of teaching*.

	Not at all relevant	Slightly relevant	Moderately relevant	Strongly relevant	Extremely relevant
assessment and evaluation	1	2	3	4	5
classroom management and discipline	1	2	3	4	5
clerical work	1	2	3	4	5
committee work/meetings	1	2	3	4	5
dealing with individual student problems	1	2	3	4	5
dealing with parents	1	2	3	4	5
effective teaching methods	1	2	3	4	5
extra-curricular duties	1	2	3	4	5
family obligations	1	2	3	4	5
financial concerns	1	2	3	4	5
heavy teaching load	1	2	3	4	5
insufficient materials and supplies	1	2	3	4	5
insufficient preparation time	1	2	3	4	5
isolation	1	2	3	4	5
knowledge of subject matter	1	2	3	4	5
motivation of pupils	1	2	3	4	5
organization of class work	1	2	3	4	5
planning lessons	1	2	3	4	5
personal relationship concerns	1	2	3	4	5
probationary teacher evaluation process	1	2	3	4	5
relations with administration	1	2	3	4	5
relations with colleagues	1	2	3	4	5
report cards	1	2	3	4	5

school policies and procedures	1	2	3	4	5
special ed./ ESL needs	1	2	3	4	5
supervision duties	1	2	3	4	5

Are there any stressors, *relevant to you*, missing from this list? If so, what are they?

Part 7: Summing Up

Given your experiences as an early-career teacher, and looking back at your teacher preparation program, what suggestions would you offer to improve teacher preparation (ie, to better prepare new teachers for the realities of the profession)?

How would you describe a *resilient* teacher?

Do you have any additional comments?

PART 8: You and your current teaching placement

1. What best describes you?

- a. ☐ 1st year teacher
- b. ☐ 2nd year teacher
- c. ☐ 3rd year teacher
- d. ☐ other (please specify _____)

2. How do you classify your current teaching position?

- a. ☐ regular full-time teacher
- b. ☐ regular part-time teacher
- c. ☐ relief teacher
- d. ☐ "casual contract" teacher
- e. ☐ other (please specify _____)

3. What type of teaching registration do you hold?

- a. ☐ provisionally registered teacher
- b. ☐ registered teacher

4. What type of school do you work in?

- a. ☐ primary
- b. ☐ middle
- c. ☐ secondary
- d. ☐ other (please specify _____)

5. What school sector do you work in?

- a. ☐ Government
- b. ☐ Catholic
- c. ☐ Independent

6. What school setting do you work in?

- a. ☐ Metro
- b. ☐ Metro *Hard to Staff*
- c. ☐ Rural
- d. ☐ Remote

7. Gender: (i) male ☐ (ii) female ☐

8. Age: _____

9. From which university did you graduate?

- a. ☐ Curtin University
- b. ☐ Edith Cowan University
- c. ☐ Murdoch University
- d. ☐ Notre Dame University
- e. ☐ University of Western Australia
- f. ☐ other (please specify _____)

10. My student number is/was: _____

11. What type of university degree do you or will you hold? (tick all that apply)

BEd ☐ BSc ☐ BA ☐ Grad Dip Ed ☐ MEd ☐ MSc ☐ MA ☐ PhD ☐

12. Please indicate the level of schooling that you are qualified to teach (check one):

- (a) early childhood ☐
- (b) elementary (primary) ☐
- (c) secondary ☐
- (c) special education ☐

13. University (undergraduate) major:

14. University (undergraduate) minor:

15. Please list the school subjects that you taught during the last school year.

16. Please enter me in the draw for:

i) iPod Touch (32 Gig) ☐ (ii) SmartPen ☐ (iii) Please don't enter me in the draw

17. My contact details for the draw are:

- a. Name

- b. Email

- c. Phone

Thanks for your valuable contribution!

Appendix 2: White paper for dissemination



Keeping Cool
Building Teachers' Resilience

Australian Learning and Teaching Council
Curtin University
Murdoch University

Introduction

Early career teacher attrition is an issue of concern both in Australia and internationally and as a result governments, employers, policy makers, higher education providers and researchers have sought explanations about why some teachers leave the profession and others stay. Successive International and Australian national reports highlight the fact that anywhere between 25 – 40 % of teachers could leave the profession within the first five years of teaching. This is clearly a major concern for governments, the community and the profession. An acute shortage of primary teachers, for example, represents one of the biggest hurdles to achieving the goal of universal primary education (UPE). As such, policies that effectively address teacher training and retention should be at the core of national education policies (UNESCO, 2011).

A great deal of research has been conducted in an attempt to understand this trend from an attrition perspective. Why do teachers leave? And alternatively, why do some teachers stay? One explanation has been that resilience may contribute to teachers' ability to adapt and thrive under challenging working conditions. Other professions such as social work, nursing, mental health, and medicine have looked to building resilience to help better prepare individuals for dealing with the challenges of their work in these fields. The teaching profession may also benefit from a focus on building resilience at the preservice and early career stages.

To investigate *building teacher resilience*, a team of researchers from Murdoch University (UWA), Curtin University (UWA) and FOMH Aachen University (Germany) developed the 'Keeping Cool: Building teacher resilience' project. The project was funded by an Australian Learning and Teaching Council grant from 2009 – 2011. Central to the project was a literature review (Beltman, Mansfield & Priest, 2011) and an extensive annotated bibliography on teacher resilience, longitudinal data collection (surveys and interviews) to explore factors influencing teacher resilience and development of a website to support resilience in preservice and practicing teachers (www.keepingcool.com.au). Complementing the website, a Facebook page was developed enabling a wider audience to view and interact with online resources. As teacher educators, these aspects of the project also enabled us to investigate how principles of resilience may be embedded in preservice teacher education programmes, both in Australia and more widely.

Aims of this paper

This paper presents the key findings from the Keeping Cool project, describing the characteristics of resilient teachers and exploring how building resilient teachers may form part of preservice teacher education programmes.

Teaching in the 21st century – challenges and expectations?

Teachers' work is highly complex, skilled and challenging. And yet it is often lowly paid and undervalued. In recent times the challenges that teachers' face have become more complex. Societal changes and policy initiatives have increased the intensity of the profession whilst at the same time reducing teacher autonomy, leading in many cases to demoralisation and high levels of attrition (eg Down, 2009; Hargreaves, 2009).

A review of the empirical literature on teacher resilience revealed an array of challenges faced by contemporary teachers in relation to their work. Many of the challenges that were identified related to the classroom and school context. These include classroom management issues, meeting diverse needs, lack of resources and lack of support from the schools leadership. Others highlighted broader issues related to the professional context of teachers' work. These challenges included heavy workloads, lack of time, increasing non-teaching duties, additional external regulations, demoralising policy initiatives, poor hiring practices and uncertain job security (Castro, Kelly & Shih, 2010; Day, 2008; Howard, 2004; Jennings, 2009).

Such challenges have led to what can be called adverse working conditions and have contributed to large numbers of early career teachers in many countries leaving the profession. There is, however, also evidence in the literature of teachers, schools and communities resisting such pressures, re-imagining schools and schooling (Smyth & McInerney, 2007), actively seeking challenges (Anderson & Cline, 2006) and finding challenges 'energising and exciting' (Brunetti, 2008, p. 819). Teachers (and their school communities) in these contexts can be seen to be thriving not just surviving and being resilient.

What does a resilient teacher look like?

Resilient teachers have been described as those who can 'rebound from disappointments' and 'sustain their commitment to the profession, and with this, their effectiveness' (Day & Gu, 2009, p. 449). Resilient teachers have 'the ability to adjust to various situations and increase [their] competence in the face of adverse conditions' (Bebek, 2002, p. 202) and thus (Day & Gu, 2009, p. 449) (Day & Gu, 2009, p. 449) are able to overcome challenging situations or recurring setbacks quickly and efficiently. Resilient teachers do not simply survive, but they maintain job satisfaction and commitment to the profession – they thrive.

As resilience is a 'multifaceted phenomenon that comes into existence because of a combination of individual characteristics ... and environmental factors' (Gordon & Coscarelli, 1996, p. 15) it is important to consider both the individual and environmental conditions under which resilience may be supported or challenged. In the context of initial teacher education therefore, understanding the individual characteristics that may help build resilience is important, as is developing preservice teachers' capacity to respond to the challenges of the profession while maintaining their own commitment.

Understanding the particular individual characteristics contributing to teacher resilience has featured in much research over the last 10 years. A range of attributes of resilient teachers have been identified, such as strong intrinsic motivation (Snidman, 2008),

self-efficacy (Day, 2008), perseverance and persistence (Yost, 2008), optimism (Le Comu, 2009), sense of humour (Bebek, 2002), emotional intelligence (Chan, 2008), willingness to take risks (Sumson, 2003) and flexibility (Le Comu, 2009). Similarly skills of resilient teachers have also been noted, such as problem solving (Castro, Kelly & Shih, 2009), active coping skills (Chan, 2008) and teaching skills (Bebek, 2002). Resilient teachers also have significant supportive relationships (Bebek, 2002; Patterson, Collins & Adair, 2004) in their personal and professional lives. These skills and attributes can act as protective factors which moderate the effects of potential threats to teacher resilience.

What makes a resilient teacher?

'I use the analogy of a branch ... the branch can break with stress, but if a branch is allowed to be exposed to the wind and the seasons it becomes more flexible. It shapes itself accordingly ...'

The 'Keeping Cool' team also investigated the question of 'what makes a resilient teacher?' from the perspective of early career and beginning teachers (Mansfield, Beltman, Price & McConney, in press). Using survey responses to the question 'what makes a resilient teacher?', aspects of resilience were identified. Rather than developing another 'list' of attributes and skills of resilient teachers, we sought to organise these aspects into broader, higher order dimensions. Although this presented a challenging task given the multi-dimensional nature of resilience, four main dimensions emerged. Aspects of resilience from our data could be related to professional, motivational, emotional and social dimensions as shown in Figure 1.

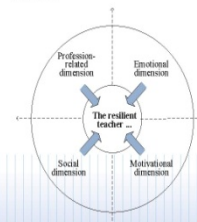


Figure 1: Four dimensions of the resilient teacher

Professional-related dimension

The professional-related dimension involves aspects concerning the practice of teaching, some of which may be traditionally addressed in teacher education programmes. These include use of 'effective teaching strategies which actively work' and 'the ability to use effective classroom behaviour techniques'. Being 'a well prepared teacher' and being able to 'multitask like a champion' were also noted.

Many teacher education programmes also focus on developing students' reflection skills and these were seen to be important for resilience.

'[A resilient teacher] "reflects on what has gone wrong, what is not working well and what is working well, and being able to make changes to the situations for the better of the students and the teacher".'

Resilient teachers were perceived as those who 'maintain their commitment to their students regardless' and 'ensure the children come first'. Being flexible and able to 'adapt quickly when new situations arise' was also noted as important.

Emotional dimension

Resilient teachers were described as those who 'love the job' and are able to 'bounce back' after facing challenges. They are 'thick skinned', don't 'take things personally' and 'stay calm in the thick of it'.

'A resilient teacher is one who doesn't sweat the small stuff. You have to be able to rise above the feelings of inadequacy and believe in yourself.'

They also 'cope with the demands associated with teaching' and know how to manage stress. Managing the challenges of teaching also included maintaining a suitable work/life balance.

'Resilient teachers "keep their sense of humour and enjoy the job" and "can laugh about the bad/stressful events that occur and does her best to start each day with a happy attitude".'

Motivational dimension

Resilient teachers were seen to be motivated teachers able to 'maintain a high level of motivation and enthusiasm for the job despite its difficulties' and 'enjoy challenges within their teaching profession'. They 'work hard to maintain a positive outlook on their work and leave school thinking about the highs rather than the lows'. Resilient teachers are also persistent.

'Resilient teachers "persist and persevere through problems or situations", and are "unrelenting when overcoming challenges within the classroom/school". They "have realistic expectations of themselves and others" and "do not give up improving themselves and their practice".'

Also related to motivation were perceptions of resilient teachers being efficacious. They are 'confident in their own abilities and knowledge' and 'believe in themselves as a professional'. This self-efficacy is strongly related to a positive experience of teachers' preparation at University.

Social dimension

Our participants also described social dimensions of being a resilient teacher. For instance, help seeking and taking advice were important.

'[A resilient teacher] "is someone who is willing to talk to others and ask the stupid questions" and "recognises when to ask for help and that it is okay to need help and assistance".'

Resilient teachers have 'solid and honest relationships with colleagues' and are able to 'talk about feelings/stresses, etc'. Support networks and the role they can play in problem solving was also noted - 'needs to have a great support network (other teachers, collegiate support person, etc) to discuss issues, problems, concerns, stresses'.

Multiple dimensions of resilience

It is important to note however, that resilient teachers were not described in terms of a single dimension. Rather, resilient teachers were perceived to demonstrate a range of dispositions and skills, related to all four dimensions.

'A resilient teacher is someone who ...'

- Has effective time management and organisational skills.
- Ensures a balance between work and leisure
- Has a positive attitude, even in times of difficulty
- Has realistic expectations of themselves and others.
- Has the ability to 'bounce back' when experiencing adversity
- Sense of humour is essential!
- Willing to talk to others and ask the stupid questions!

This multi-dimensional view of resilience reflects the extant literature and highlights the idea that resilience involves a complex interplay between many capacities, skills, knowledge in the face of adverse conditions.

'I am resilient ... that's why I'm leaving - but I'm still going to be a teacher'

It's important to acknowledge that our position is not that resilient teachers are those remaining in the profession with the view to 'survive'. Moreover, our emphasis is on 'thriving' and the understanding that teacher resilience is evidenced by the ability to adapt despite challenging circumstances and sustain enthusiasm and commitment. This allows the possibility that the decision to leave a teaching situation due to ongoing challenges and pressures may not necessarily reflect lack of resilience. Moreover, a resilient teacher may recognise that the actions required to 'adapt' to a challenging circumstance may reduce their enthusiasm and commitment to the profession. Moving to another teaching context may provide new opportunities to realise professional goals.

